

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior version and listings of claims in the application. Please cancel claims 1-118, 154-167, and 195-229. Please amend claims 119-134, 137-141, 143-151, 168-186, 188-194, and 230. Please add claims 231-312.

1 - 118. (cancelled)

119. (currently amended) A method of making a paper product comprising:

dispersing papermaking fibers in ~~[[an]]~~ a first aqueous solution;

dispersing thermally bondable fibers exhibiting hydrophilicity in ~~[[an]]~~ the first or a second aqueous solution;

forming said papermaking fibers and said thermally bondable fibers into a nascent tissue web, wherein said nascent tissue web is formed at a line speed in excess of 1000 ~~ft/min.,~~ feet/minute and wherein said nascent tissue web has a basis weight of less than about 35 pounds/ream and a formation index of greater than about 42; and

drying said nascent tissue web.

120. (currently amended) The method according to claim 119, wherein said papermaking fibers and said thermally bondable fibers are dispersed simultaneously in the first aqueous solution.

121. (currently amended) The method according to claim 119, wherein said papermaking fibers and said thermally bondable fibers are dispersed sequentially in the first aqueous solution.

122. (currently amended) The method according to claim 119, wherein the ~~dispersion of fibers~~ tissue web further comprises a wet strength ~~[[adjusting]]~~ agent.

123. (currently amended) The method according to claim 122, wherein the ~~wet-strength resin~~ wet strength agent is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

124. (currently amended) The method according to claim 123, wherein the wet strength ~~[[resin]]~~ agent comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

125. (currently amended) The method according to claim 123, wherein the ~~wet-strength resin~~ wet strength agent comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

126. (currently amended) The method according to claim 119, wherein the tissue web further comprising comprises a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

127. (currently amended) The method according to claim 119, wherein said tissue web is formed by conventional wet pressing.

128. (currently amended) The method according to claim 127, ~~wherein said web is creped from a Yankee dryer~~ further comprising creping said tissue web from a Yankee dryer after drying.

129. (currently amended) The method according to claim 127, wherein the papermaking fibers and the thermally bondable fibers in the tissue web are stratified.

130. (currently amended) The method according to claim 119, ~~wherein said web is formed~~ further comprising forming the tissue web by through air drying.

131. (currently amended) The method according to claim 130, ~~wherein said web is creped from a Yankee dryer~~ further comprising creping said tissue web from a Yankee dryer after drying.

132. (currently amended) The method according to claim 130, wherein said tissue web is uncreped.

133. (currently amended) The method according to claim 130, wherein the papermaking fibers and the thermally bondable fibers in the tissue web are stratified.

134. (currently amended) The method according to claim 119, ~~wherein the dried paper web is subject to heat treatment~~ further comprising heat treating said tissue web after drying.

135. (original) The method according to claim 134, wherein the heat treatment is carried out at a temperature of at least about 165°F.

136. (original) The method according to claim 134, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

137. (currently amended) The method according to claim 119, wherein the papermaking ~~fiber is~~ fibers are wood ~~[[fiber]]~~ fibers.

138. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber is~~ fibers are chosen from at least one of ~~[[a]]~~ bicomponent ~~[[or a]]~~ and tricomponent ~~[[fiber]]~~ fibers.

139. (currently amended) The method according to claim 138, wherein the thermally bondable ~~fiber is a~~ fibers are bicomponent ~~[[fiber]]~~ fibers that ~~comprises one or more~~ comprise at least one of polyesters, polyolefins, copolyolefins, polyethylenes,

polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids, ~~and mixtures thereof.~~

140. (currently amended) The method according to claim 138, wherein the thermally bondable ~~fiber is a~~ fibers are tricomponent ~~[[fiber]]~~ fibers that ~~comprises one or more~~ comprise at least one of polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids, ~~and mixtures thereof.~~

141. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber is~~ fibers are surface ~~[[is]]~~ modified by the introduction of a surfactant chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

142. (original) The method according to claim 141, wherein the surfactant comprises a non-ionic surfactant.

143. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber is~~ fibers are present in the tissue web in an amount of not less than about 2%.

144. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber is~~ fibers are present in the tissue web in an amount of not more than about 50%.

145. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber is~~ fibers are present in the tissue web in an amount of from about 5 to about 30%.

146. (currently amended) The method according to claim 119, wherein the papermaking fibers and the thermally bondable fibers in the tissue web are homogeneous.

147. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber has~~ fibers have a length of not less than about 1 mm.

148. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber has~~ fibers have a length of not more than about 25 mm.

149. (currently amended) The method according to claim 119, wherein the thermally bondable ~~fiber has~~ fibers have a length of from about 6 to about 13 mm.

150. (currently amended) The method according to claim 119, further comprising embossing the tissue web after drying.

151. (currently amended) The method according to claim 150, ~~wherein the dried paper web is subject to heat treatment~~ further comprising heat treating said tissue web after drying.

152. (original) The method according to claim 151, wherein the heat treatment is carried out at a temperature of at least about 165°F.

153. (original) The method according to claim 152, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

154 - 167. (cancelled)

168. (currently amended) A method of making an embossed paper product comprising:

dispersing papermaking fibers in ~~[[an]]~~ a first aqueous solution;

dispersing thermally bondable fibers exhibiting hydrophilicity in ~~[[an]]~~ the first or a second aqueous solution, wherein the thermally bondable ~~fiber is~~ fibers are chosen from at least one of ~~[[a]]~~ bicomponent and ~~[[or a]]~~ tricomponent ~~[[fiber]]~~ fibers;

forming said papermaking fibers and said thermally bondable fibers into a nascent tissue web, wherein said nascent tissue web is formed at a line speed in excess of 1000 feet/minute and wherein said nascent tissue web has a basis weight of less than about 35 pounds/ream and a formation index of greater than about 42;

drying said nascent tissue web;

embossing said nascent tissue web; and

heat treating said nascent tissue web at a temperature of at least about 200°F.

169. (currently amended) The method according to claim 168, wherein said papermaking fibers and said thermally bondable fibers are dispersed simultaneously in the first aqueous solution.

170. (currently amended) The method according to claim 168, wherein said papermaking fibers and said thermally bondable fibers are dispersed sequentially in the first aqueous solution.

171. (currently amended) The method according to claim 168, wherein the ~~dispersion of fibers~~ tissue web further comprises a wet strength ~~[[adjusting]]~~ agent.

172. (currently amended) The method according to claim 171, wherein the ~~wet-strength resin~~ wet strength agent is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

173. (currently amended) The method according to claim 172, wherein the wet strength ~~[[resin]]~~ agent comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

174. (currently amended) The method according to claim 172, wherein the ~~wet-~~
~~strength resin~~ wet strength agent comprises a temporary wet strength agent chosen
from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde,
succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted
starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted
polymeric reaction products of monomers or polymers having aldehyde groups.

175. (currently amended) The method according to claim 168, wherein the
dispersion of papermaking and thermally bondable fibers further ~~comprising~~ comprises
a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and
carboxymethyl cellulose.

176. (currently amended) The method according to claim 168, wherein said
tissue web is formed by conventional wet pressing.

177. (currently amended) The method according to claim 176, ~~wherein said web~~
~~is creped from a Yankee dryer~~ further comprising creping said tissue web from a
Yankee dryer after drying.

178. (currently amended) The method according to claim 176, wherein the
papermaking fibers and the thermally bondable fibers in the tissue web are stratified.

179. (currently amended) The method according to claim 168, wherein said tissue web is formed by through air drying.

180. (currently amended) The method according to claim 179, ~~wherein said web~~ is creped from a Yankee dryer further comprising creping said tissue web from a Yankee dryer after drying.

181. (currently amended) The method according to claim 179, wherein said tissue web is uncreped.

182. (currently amended) The method according to claim 179, wherein the papermaking fibers and the thermally bondable fibers in the tissue web are stratified.

183. (currently amended) The method according to claim 168, wherein the papermaking ~~fiber is~~ fibers are wood ~~[[fiber]]~~ fibers.

184. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber is a~~ fibers are bicomponent ~~[[fiber]]~~ fibers that ~~comprises one or more~~ comprise at least one of polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids, ~~and mixtures thereof.~~

185. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber is a~~ fibers are tricomponent ~~[[fiber]]~~ fibers that ~~comprises one or more~~ comprise at least one of polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids, ~~and mixtures thereof~~.

186. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber is~~ fibers are surface modified by the introduction of a surfactant chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

187. (original) The method according to claim 186, wherein the surfactant comprises a non-ionic surfactant.

188. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber is~~ fibers are present in the tissue web in an amount of not less than about 2%.

189. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber is~~ fibers are present in the tissue web in an amount of not more than about 50%.

190. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber is~~ fibers are present in the tissue web in an amount of from about 10 to about 30%.

191. (currently amended) The method according to claim 168, wherein the papermaking fibers and the thermally bondable fibers in the web are homogeneous.

192. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber has~~ fibers have a length of not less than about 1 mm.

193. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber has~~ fibers have a length of not more than about 25 mm.

194. (currently amended) The method according to claim 168, wherein the thermally bondable ~~fiber has~~ fibers have a length of from about 6 to about 13 mm.

195 - 229. (cancelled)

230. (currently amended) The method according to claim ~~[[168]]~~ 168, wherein the web is heat treated at a temperature of at least about 260°F.

231. (new) The method according to claim 119, further comprising forming said tissue web by use of a slotted screen.

232. (new) The method according to claim 168, further comprising forming said tissue web by use of a slotted screen.

233. (new) A method of making a paper product comprising:
dispersing papermaking fibers in a first aqueous solution;
dispersing thermally bondable fibers exhibiting hydrophilicity in the first or a second aqueous solution;
forming said papermaking fibers and said thermally bondable fibers into a nascent tissue web, wherein said nascent tissue web is formed at a line speed in excess of 1000 feet/minute and wherein said nascent tissue web has a CD wet breaking length of at least about 250 meters and a SAT capacity of at least about 5 grams/gram;
and
drying said nascent tissue web.

234. (new) The method according to claim 233, wherein said papermaking fibers and said thermally bondable fibers are dispersed simultaneously in the first aqueous solution.

235. (new) The method according to claim 233, wherein said papermaking fibers and said thermally bondable fibers are dispersed sequentially in the first aqueous solution.

236. (new) The method according to claim 233, wherein the tissue web further comprises a wet strength agent.

237. (new) The method according to claim 236, wherein the wet strength agent is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

238. (new) The method according to claim 237, wherein the wet strength agent comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

239. (new) The method according to claim 237, wherein the wet strength agent comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

240. (new) The method according to claim 233, wherein the tissue web further comprises a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

241. (new) The method according to claim 233, wherein the tissue web is formed by conventional wet pressing.

242. (new) The method according to claim 241, further comprising creping said tissue web from a Yankee dryer after drying.

243. (new) The method according to claim 241, wherein the papermaking fibers and thermally bondable fibers in the tissue web are stratified.

244. (new) The method according to claim 233, further comprising forming the tissue web by through air drying.

245. (new) The method according to claim 244, further comprising creping said tissue web from a Yankee dryer after drying.

246. (new) The method according to claim 244, wherein said tissue web is uncreped.

247. (new) The method according to claim 244, wherein the papermaking fibers and thermally bondable fibers in the tissue web are stratified.

248. (new) The method according to claim 233, further comprising heat treating said tissue web after drying.

249. (new) The method according to claim 248, wherein the heat treatment is carried out at a temperature of at least about 165°F.

250. (new) The method according to claim 248, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

251. (new) The method according to claim 233, wherein the papermaking fibers are wood fibers.

252. (new) The method according to claim 233, wherein the thermally bondable fibers are chosen from at least one of bicomponent and tricomponent fibers.

253. (new) The method according to claim 252, wherein the thermally bondable fibers are bicomponent fibers that comprise at least one of polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids.

254. (new) The method according to claim 252, wherein the thermally bondable fibers are tricomponent fibers that comprise at least one of polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids.

255. (new) The method according to claim 233, wherein the thermally bondable fibers are surface modified by the introduction of a surfactant chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

256. (new) The method according to claim 255, wherein the surfactant comprises a non-ionic surfactant.

257. (new) The method according to claim 233, wherein the thermally bondable fibers are present in the tissue web in an amount of not less than about 2%.

258. (new) The method according to claim 233, wherein the thermally bondable fibers are present in the tissue web in an amount of not more than about 50%.

259. (new) The method according to claim 233, wherein the thermally bondable fibers are present in the tissue web in an amount of from about 5 to about 30%.

260. (new) The method according to claim 233, wherein the papermaking fibers and thermally bondable fibers in the tissue web are homogeneous.

261. (new) The method according to claim 233, wherein the thermally bondable fibers have a length of not less than about 1 mm.

262. (new) The method according to claim 233, wherein the thermally bondable fibers have a length of not more than about 25 mm.

263. (new) The method according to claim 233, wherein the thermally bondable fibers have a length of from about 6 to about 13 mm.

264. (new) The method according to claim 233, further comprising embossing the tissue web after drying.

265. (new) The method according to claim 264, further comprising heat treating the tissue web after drying.

266. (new) The method according to claim 265, wherein the heat treatment is carried out at a temperature of at least about 165°F.

267. (new) The method according to claim 266, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

268. (new) The method according to claim 233, further comprising forming said tissue web by use of a slotted screen.

269. (new) The method according to claim 233, wherein the CD wet breaking length is at least about 300 meters.

270. (new) The method according to claim 233, wherein the CD wet breaking length is from at least about 250 meters to about 500 meters.

271. (new) The method according to claim 233, wherein the SAT capacity is at least about 6 grams/gram.

272. (new) The method according to claim 233, wherein the SAT capacity is from at least about 5 grams/gram to about 14 grams/gram.

273. (new) A method of making a paper product comprising:
dispersing papermaking fibers in a first aqueous solution;
dispersing thermally bondable fibers exhibiting hydrophilicity in the first or a second aqueous solution;
forming said papermaking fibers and said thermally bondable fibers into a nascent tissue web, wherein said nascent tissue web is formed at a line speed in excess of 1000 feet/minute, and wherein said nascent tissue web has a weight basis of less than about 35 pounds/ream, a formation index of greater than about 42, a CD wet breaking length of at least about 250 meters, and a SAT capacity of at least about 5 grams/gram; and
drying said nascent tissue web.

274. (new) The method according to claim 273, wherein said papermaking fibers and said thermally bondable fibers are dispersed simultaneously in the first aqueous solution.

275. (new) The method according to claim 273, wherein said papermaking fibers and said thermally bondable fibers are dispersed sequentially in the first aqueous solution.

276. (new) The method according to claim 273, wherein the tissue web further comprises a wet strength agent.

277. (new) The method according to claim 276, wherein the wet strength agent is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

278. (new) The method according to claim 277, wherein the wet strength agent comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

279. (new) The method according to claim 277, wherein the wet strength agent comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde,

dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

280. (new) The method according to claim 273, wherein the tissue web further comprises a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

281. (new) The method according to claim 273, wherein the tissue web is formed by conventional wet pressing.

282. (new) The method according to claim 281, further comprising creping said tissue web from a Yankee dryer after drying.

283. (new) The method according to claim 281, wherein the papermaking fibers and thermally bondable fibers in the tissue web are stratified.

284. (new) The method according to claim 273, further comprising forming the tissue web by through air drying.

285. (new) The method according to claim 284, further comprising creping said tissue web from a Yankee dryer after drying.

286. (new) The method according to claim 284, wherein said tissue web is uncreped.

287. (new) The method according to claim 284, wherein the papermaking fibers and thermally bondable fibers in the tissue web are stratified.

288. (new) The method according to claim 273, further comprising heat treating said tissue web after drying.

289. (new) The method according to claim 288, wherein the heat treatment is carried out at a temperature of at least about 165°F.

290. (new) The method according to claim 288, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

291. (new) The method according to claim 273, wherein the papermaking fibers are wood fibers.

292. (new) The method according to claim 273, wherein the thermally bondable fibers are chosen from at least one of bicomponent and tricomponent fibers.

293. (new) The method according to claim 292, wherein the thermally bondable fibers are bicomponent fibers that comprise at least one of polyesters, polyolefins,

copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids.

294. (new) The method according to claim 292, wherein the thermally bondable fibers are tricomponent fibers that comprise at least one of polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, and polylactic acids.

295. (new) The method according to claim 273, wherein the thermally bondable fibers are surface modified by the introduction of a surfactant chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

296. (new) The method according to claim 295, wherein the surfactant comprises a non-ionic surfactant.

297. (new) The method according to claim 273, wherein the thermally bondable fibers are present in the tissue web in an amount of not less than about 2%.

298. (new) The method according to claim 273, wherein the thermally bondable fibers are present in the tissue web in an amount of not more than about 50%.

299. (new) The method according to claim 273, wherein the thermally bondable fibers are present in the tissue web in an amount of from about 5 to about 30%.

300. (new) The method according to claim 273, wherein the papermaking and thermally bondable fibers in the tissue web are homogeneous.

301. (new) The method according to claim 273, wherein the thermally bondable fibers have a length of not less than about 1 mm.

302. (new) The method according to claim 273, wherein the thermally bondable fibers have a length of not more than about 25 mm.

303. (new) The method according to claim 273, wherein the thermally bondable fibers have a length of from about 6 to about 13 mm.

304. (new) The method according to claim 273, further comprising embossing the tissue web after drying.

305. (new) The method according to claim 304, further comprising heat treating the tissue web after drying.

306. (new) The method according to claim 305, wherein the heat treatment is carried out at a temperature of at least about 165°F.

307. (new) The method according to claim 306, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

308. (new) The method according to claim 273, further comprising forming said tissue web by use of a slotted screen.

309. (new) The method according to claim 273, wherein the CD wet breaking length is at least about 300 meters.

310. (new) The method according to claim 273, wherein the CD wet breaking length is from at least about 250 meters to about 500 meters.

311. (new) The method according to claim 273, wherein the SAT capacity is at least about 6 grams/gram.

312. (new) The method according to claim 273, wherein the SAT capacity is from at least about 5 grams/gram to about 14 grams/gram.